WHAT IS CLAIMED IS:

1. A video signal processing apparatus, comprising:

a tuner for receiving a broadcasting signal and generating an original video signal;

a video processor for receiving said original video signal and generating a first digital video signal;

a non-interlaced signal processing unit for receiving said first digital video signal and generating a display signal for a user to be watched on a display;

a microprocessor connected to said tuner, said video processor and said non-interlaced signal processing unit, for transmitting related data signal to each unit and controlling an operation of each unit; and

a computer signal converter for receiving said first digital video signal, generating a computer video signal in a general computer interface format, and transmitting said computer video signal to a computer to be read and recorded in a storage media;

wherein when said computer is turned off and said video signal processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display; and

wherein when said computer is turned on and said video processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display, and said computer video signal is read and recorded in said storage media by said computer.

2. The video signal processing apparatus of claim 1, wherein said video signal processing apparatus further comprises a switch connected to said microprocessor and placed between said video processor and said non-interlaced signal processing unit, and said switch performs switching between said video processor and said computer signal converter.

3. The video signal processing apparatus of claim 1, wherein said video signal processing apparatus further comprises a switch connected to said microprocessor and placed between said non-interlaced signal processing unit and said display, and said switch performs switching between said non-interlaced signal processing unit and said computer.

4. The video signal processing apparatus of claim 1, wherein said non-interlaced signal processing unit comprises:

a deinterlacer for receiving said first digital video signal and generating a non-interlaced signal; and

a display signal converter for receiving said non-interlaced signal and generating said display signal to be watched by said user on said display.

5. The video signal processing apparatus of claim 1, wherein said computer signal converter comprises:

a MPEG encoder for receiving said first digital video signal and generating a first MPEG signal compatible with a MPEG standard; and a computer interface module for receiving said first MPEG signal and generating said computer video signal to be read and recorded in said storage media by said computer.

6. The video signal processing apparatus of claim 5,

wherein said computer signal converter further comprises a MPEG decoder and said computer transmits said computer video signal recorded in said storage media to said computer interface module, so that said computer interface module generates a second MPEG signal; and

wherein said MPEG decoder receives said second MPEG signal to generate a second digital video signal and said second digital video signal is transmitted to said display via said non-interlaced signal processing unit.

7. The video signal processing apparatus of claim 1,

wherein said computer signal converter comprises a computer transmission interface.

8. The video signal processing apparatus of claim 1,

wherein said video signal processing apparatus further comprises a remote controller connected to said microprocessor and said user uses a remote control transmitter to activate said remote controller to enable said video signal processing apparatus.

9. The video signal processing apparatus of claim 1,

wherein said video processor further comprises receiving a general video signal and said video processor generates said first digital video signal according to said original video signal or said general video signal.

10. The video signal processing apparatus of claim 1,

wherein said video processor comprises a video decoder.

11. A video signal processing apparatus, comprising:

a first tuner for receiving a broadcasting signal and generating a first original video signal;

a second tuner for receiving said broadcasting signal and generating a second original video signal;

a first video processor for receiving said first original video signal and generating a first digital video signal;

a second video processor for receiving said second original video signal and generating a second digital video signal;

a computer signal converter for receiving said second digital video signal, generating a computer video signal in a general computer interface format, and transmitting said computer video signal to a computer to be read and recorded in a storage media by said computer;

a non-interlaced signal processing unit for receiving said first digital video signal ,generating a first display signal, and transmitting said first display signal to a display; and a microprocessor connected to said first tuner, said second tuner, said first video processor, said second video processor, and said non-interlaced signal processing unit, for transmitting related data signal to each unit and controlling an operation of each unit;

wherein said computer generates a non-interlaced display signal according to said computer video signal and transmits said non-interlaced display signal to said display to perform image overlapping with said first display signal, so that a picture-in-picture image is watched by said user on said display;

wherein when said computer is turned off and said video signal processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display; and

wherein when said computer is turned on and said video processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display, and said computer video signal is read and recorded in said storage media by said computer, so that a picture-in-picture image is watched by said user on said display.

12. The video signal processing apparatus of claim 11,

wherein said video processing apparatus further comprises a switch connected to said microprocessor and placed between said first video processor and said non-interlaced signal processing unit, for performing switching between said first video processor and said computer signal converter.

13. The video signal processing apparatus of claim 11, wherein said video processing apparatus further comprises a switch connected to said microprocessor and placed between said non-interlaced signal processing unit and said display, for performing switching between said non-interlaced signal processing unit and said computer.

14. The video signal processing apparatus of claim 13, wherein said switch receives said first display signal from said non-interlaced signal processing unit and said non-interlaced display signal from said computer, and said switch performs image overlapping , so that a picture-in-picture image is watched by said user on said display.

15. The video signal processing apparatus of claim 11, wherein said non-interlaced signal processing unit comprises:

a deinterlacer for receiving said first digital video signal and generating a non-interlaced signal; and

a display signal converter for receiving said non-interlaced signal and generating said first display signal.

16. The video signal processing apparatus of claim 11, wherein said video signal processing apparatus further comprises:

a computer wherein said computer generates a computer video interface signal according to said computer video signal and wherein said computer video interface converter is used to receive said computer video interface signal, so that said computer video interface converter generates a third digital video signal;

wherein said non-interlaced signal processing unit receives said first digital video signal and said third digital video signal, and performs image overlapping, so that said non-interlaced signal processing unit generates a picture-in-picture image watched by said user on said display.

17. The video signal processing apparatus of claim 11,

wherein said computer signal converter comprises:

a MPEG encoder for receiving said second digital video signal and generating a first MPEG signal compatible with a MPEG standard; and

a computer interface module for receiving said first MPEG signal and generating said computer video signal to be read and recorded in said storage media by said computer.

18. The video signal processing apparatus of claim 17,

wherein said computer signal converter further comprises a MPEG decoder and said computer transmits said computer video signal recorded in said storage media to said computer interface module, so that said computer interface module generates a second MPEG signal; and

wherein said MPEG decoder receives said second MPEG signal to generate a forth digital video signal and said forth digital video signal is transmitted to said display via said non-interlaced signal processing unit.

19. The video signal processing apparatus of claim 11, wherein said computer signal converter comprises a computer transmission interface.

20. The video signal processing apparatus of claim 11, wherein said video signal processing apparatus further comprises a remote controller connected to said microprocessor and said user uses a remote control transmitter to activate said remote controller to enable said video signal processing apparatus.

21. The video signal processing apparatus of claim 11, wherein said first video processor further comprises receiving a general video signal and said first video processor generates said first digital video signal according to said first original video signal or said general video signal.

22. The video signal processing apparatus of claim 11, wherein said second video processor further comprises receiving a general video signal and said second video processor generates said second digital video signal according to said second original video signal or said general video signal.

23. The video signal processing apparatus of claim 11, wherein said first and second video processor comprise a video decoder respectively.

24. A computer system, comprising:

a computer; and

a video signal processing apparatus, comprising

a tuner for receiving a broadcasting signal and generating an original video signal;

a video processor for receiving said original video signal and generating a first digital video signal;

a microprocessor connected to said tuner and said video processor, for transmitting related data signal to each unit and controlling an operation of each unit;

a computer signal converter for receiving said first digital video signal, generating a computer video signal in a general computer interface format, and transmitting said computer video signal to said computer to be read and recorded in a storage media by said computer; and

a display comprising a non-interlaced signal processing unit, wherein said non-interlaced signal processing unit receives said first digital video signal and generates a display signal so that said display signal is watched by a user on said display;

wherein when said computer is turned off and said video signal processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display; and

wherein when said computer is turned on and said video processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display, and said computer video signal is read and recorded in said storage media by said computer.

25. A computer system, comprising:

a computer; and

a video signal processing apparatus, comprising:

a first tuner for receiving a broadcasting signal and generating a first original video signal;

a second tuner for receiving said broadcasting signal and generating a second original video signal;

a first video processor for receiving said first original video signal and generating a first digital video signal;

a second video processor for receiving said second original video signal and generating a second digital video signal;

a computer signal converter for receiving said second digital video signal, generating a computer video signal in a general computer interface format, and transmitting said computer video signal to said computer to be read and recorded in a storage media by said computer;

a microprocessor connected to said first tuner, said second tuner, said first video processor, and said second video processor, for transmitting related data signal to each unit and controlling an operation of each unit; and

a display comprising a non-interlaced signal processing unit, wherein said non-interlaced signal processing unit receives said first digital video signal and generates a first display signal;

wherein said computer generates a second display signal according to said computer video signal and transmits said second display signal to said display to perform image overlapping with said first display signal, so that a picture-in-picture image is watched by said user on said display;

wherein when said computer is turned off and said video signal processing apparatus is enabled, said display is instantly turned on and said first display signal is watched by said user on said display; and

wherein when said computer is turned on and said video processing apparatus is enabled, said display is instantly turned on and said display signal is watched by said user on said display, and said computer video signal is read and recorded in said storage media by said computer, so that a picture-in-picture image is watched by said user on said display.

26. A computer system comprising a display and a computer,

wherein said display comprises said video signal processing apparatus of claim 1 or claim 11.

27. A computer system comprising a display and a computer,

wherein said computer comprises said video signal processing apparatus of claim 1 or claim 11.

28. A computer system comprising a display , a computer, and a video signal processing apparatus,

wherein said video signal processing apparatus comprises said video signal processing apparatus of claim 1 or claim 11.